CLAIMS

We claim:

1. A service provided to an application running on a computing device, the service comprising discovering logical networks to which the computing device is connected, naming the logical networks in a manner that provides a mapping between names given to the logical networks and the logical networks, and correlating the names given to logical networks with network interfaces on the computing device through which the logical networks may be accessed.

2. The service of claim 1 wherein the mapping between names given to the logical networks and the logical networks is a one-to-one mapping.

3. The service of claim 1 wherein the names given to logical networks are based on information in the set: DNS domain names, static information provided by a user, subnet addresses, 802.1X network identity strings.

4. The service of claim 1 further comprising correlating the names given to logical networks with application programming interfaces of transport protocols supported by the logical networks, providing to the application information about connections to the logical networks, and notifying the application when information reported to it changes.

5. The service of claim 1 further comprising determining a connectivity type for a logical network.

6. The service of claim 5 wherein the connectivity type is in the set: ad hoc, managed, unmanaged, unknown.

7. The service of claim 1 further comprising determining whether a logical network has connectivity to the Internet.

8. A computer-readable medium having instructions for providing a service on a computing device, the service comprising discovering logical networks to which the computing device is connected, naming the logical networks in a manner that provides a mapping between names given to the logical networks and the logical networks, and correlating the names given to logical networks with network interfaces on the computing device through which the logical networks may be accessed.

9. A computer-readable medium having stored thereon a data structure, the data structure comprising:

a first data field containing data representing a name of a logical network to which a computing device is connected; and

a second data field containing data representing a globally unique identifier of an interface on the computing device through which the logical network is accessible.

10. The data structure of claim 9 further comprising:

a third data field containing data representing the type of connection from the computing device to the logical network; and

a fourth data field containing data representing the speed of the connection from the computing device to the logical network.

11. The data structure of claim 9 further comprising:

a third data field containing data representing a connectivity type for the logical network.

12. The data structure of claim 9 further comprising:

a third data field containing data representing whether the computing device has connectivity to the Internet via the logical network.

13. A method for an application running on a computing device to choose a configuration to use, the method comprising accessing a service provided by the computing device to retrieve names of logical networks to which the computing device is attached, accessing a list that relates logical network names to stored application configurations, and choosing a configuration that is related to a logical network name retrieved.

14. The method of claim 13 wherein the service provides to the application information about connections to the logical networks in addition to the names.

15. The method of claim 14 wherein the application is informed when the logical network information provided to it changes.

16. The method of claim 15 wherein the change notification indicates that the computing device lost its connection to a logical network and wherein the application retrieves the name of another logical network, accesses the list that relates logical network names to stored application configurations, and chooses a configuration that is related to the other logical network name.

17. A computer-readable medium containing instructions for performing the method of claim 13.

18. A method for determining a connectivity type for a computing device's network interface, the method comprising:

if an address of the computing device on the interface is a valid, private address, and if no gateway is found on the interface, then determining that the interface's connectivity type is ad hoc;

else if an address of the computing device on the interface is a valid, public address, and if a specific name server is configured on the interface, and if a domain is configured on the interface, then determining that the interface's connectivity type is managed;

else if an address of the computing device on the interface is a valid address, and if a connectivity services beacon is received on the interface, then determining that the interface's connectivity type is unmanaged;

else determining that the interface's connectivity type is unknown.

19. A computer-readable medium having instructions for performing the method of claim 18.

20. A method for determining whether a computing device's network interface has connectivity to the Internet, the method comprising:

if an address of the computing device on the interface is invalid, or if no gateway is configured on the interface, or if no specific name server is configured on the interface, then determining that the interface does not have connectivity to the Internet;

else if an Internet name can be resolved using a name server configured on the interface, then determining that the interface has connectivity to the Internet;

else determining that the interface does not have connectivity to the Internet.

21. A computer-readable medium having instructions for performing the method of claim 20.